

BECO MEMBRAN *PFplus* 

BECO Membrane Filter Cartridges for the Beverage Industry



Product Information



(prior to bottling) for use after pre-filtration using BECO depth filter sheets or BECO pre-filter cartridges for example. It guarantees reliable filtration of yeast and bacteria such as *Lactobacillus*, *Pediococcus*, *Leuconostos oenos* or *E. coli*, etc.

Since only two materials are used – polyvinylidene fluoride (PVDF) and polypropylene – the filter cartridges have a wide resistance (< pH 12) to common cleaning agents.

BECO MEMBRAN PFplus filters feature a newly developed end cap resulting in excellent mechanical robustness.

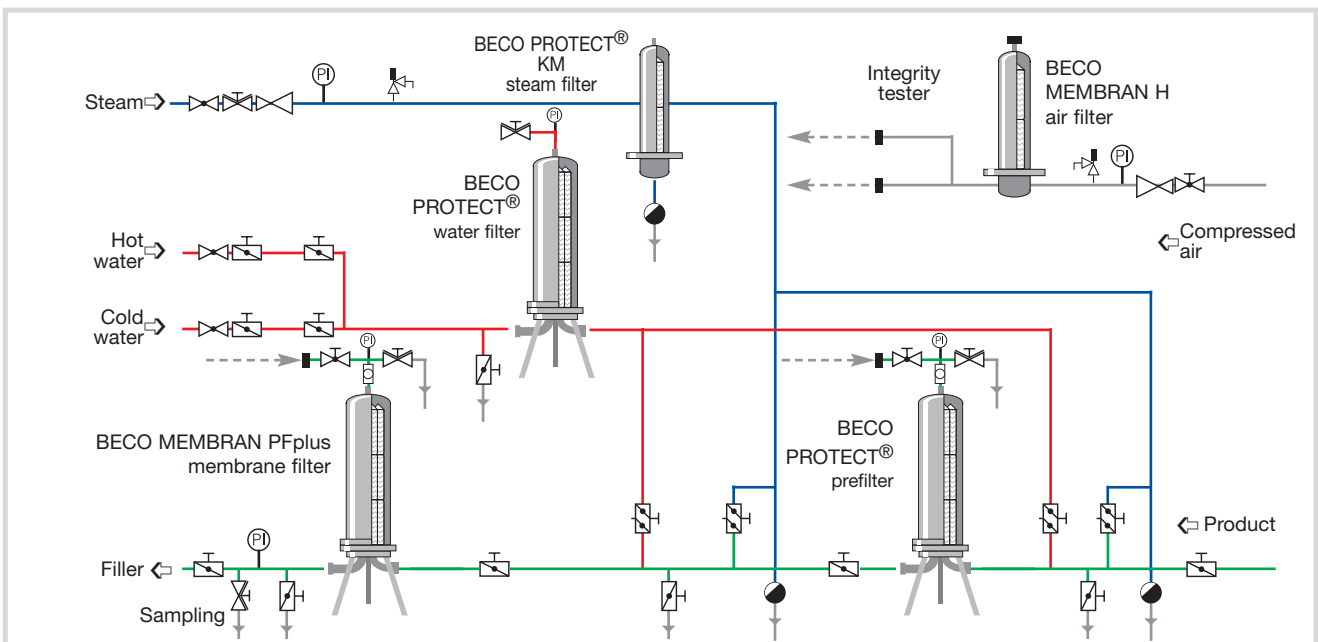
Product Advantages

- Long service life through larger filter area and excellent mechanical stability
- High reliability due to uniform pore sizes
- Excellent microbiological resistance to sterilizing and cleaning agents; a major item for successful regeneration
- Resistance to hot water rinsing at temperatures up to 95 °C
- Multiple steam or hot water sterilization cycles
- Elastic and durable membrane materials
- Used filter cartridges can be stored in a dry place. The wettability and elasticity of the membranes is maintained

Product Description

The BECO MEMBRAN PFplus was developed especially for the beverage industry as a final sterile end filter

Application examples



Product Specifications

Materials

- Pleated, hydrophilic polyvinylidene-fluoride (PVDF) membranes
- Inside and outside support corpus and end caps made of polypropylene
- Silicone O-rings

Pore size

- 0.22 µm, KVBL range for bacteria retention
- 0.45 µm, KVBB range for bacteria retention
- 0.65 µm, KVBY range for yeast retention
- 1.0 µm, KVBA range for yeast retention

Operating conditions

- max. Differential pressure in the direction of flow
 - ➔ 5.5 bar at 25 °C
 - ➔ 1.7 bar at 80 °C
 - ➔ 0.35 bar at 121 °C
- max. differential pressure against flow direction 3.5 bar at 25 °C (intermittent)
- Maximum operating temperature: 80 °C

Retention efficiency per cm²

Type	Pore size	Microorganisms
KVBL	0.22 µm	≥ 10 ⁷ <i>Pseudomonas aeruginosa</i> and <i>E. Coli</i>
KVBB	0.45 µm	≥ 10 ⁷ <i>Lactobacillus hilgardii</i> , <i>Oenococcus oeni</i>
KVBY	0.65 µm	≥ 10 ⁷ <i>Saccharomyces cerevisiae</i>
KVBA	1.0 µm	≥ 10 ⁶ <i>Saccharomyces cerevisiae</i>

Dimensions

- Outer diameter: 69 mm
- Lengths: 25 cm/10"
50 cm/20"
75 cm/30"
100 cm/40" on request

Filtration surface

- 0.78 m² per 25 cm/10" element

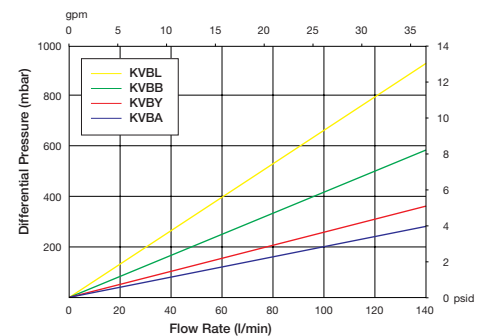
Integrity test

Pore size	Test pressure	Max. diffusion rate pro 25 cm element
0.22 µm	2.8 bar	15.2 ml/min
0.45 µm	1.5 bar	17.1 ml/min
0.65 µm	0.6 bar	9.1 ml/min
1.00 µm	0.5 bar	6.3 ml/min

Rinsing and sterilization

- Rinse with cold and then with hot water (80 °C) after completion of the filtration process according to user instructions
- Sterilize at a max. temperature of 95 °C or with saturated steam at a max. temperature of 109 °C for a period of 20 minutes after steam has emerged from all openings and valves
- The water should be decalcified and filtered (1 µm)

Water flow rates for a 75 cm/30" element at 25 °C



Ordering Information

Adapter code



Code 0
Code 5
Double O-ring
(2-222)



Code 7
Double O-ring
(2-226) quarter
turn fastener



Closed flat cap
with centering tip
for Code 5 and 7



Closed flat cap
without centering
tip for Code 0

Ordering details

Sample order: pore size: 0.45 µm, adapter: double O-ring quarter turn fastener, length: 75 cm



Cartridge type	Pore size	Adapter code*	Length*	Gasket
	BL = 0.22 µm	7	1 = 25 cm/10" 2 = 50 cm/20" 3 = 75 cm/30"	A = silicone
	BB = 0.45 µm	0 5 7	(2 = 50 cm/20") 3 = 75 cm/30"	A = silicone
	BY = 0.65 µm	5 7	(2 = 50 cm/20") 3 = 75 cm/30"	A = silicone
	BA = 1.0 µm	7	3 = 75 cm/30"	A = silicone

* others adapters and lengths available on request

All information is given to the best of our knowledge.

They reflect current know-how and do not claim to be complete.

No warranty is expressed or implied.

The application of our products outside the test criteria specified in the technical information requires separate verification by the customer. In such cases, no liability for any damage whatsoever can be accepted. Further detailed information can be found in the respective technical information sheets, instruction manuals and user notes. Misuse of the product will result in all warranties being voided, including any third-party commercial property rights.

Subject to change in the interest of technical progress.

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